MCH Data Brief

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Kentucky Department for Public Health , Division of Maternal & Child Health

Early Elective Deliveries

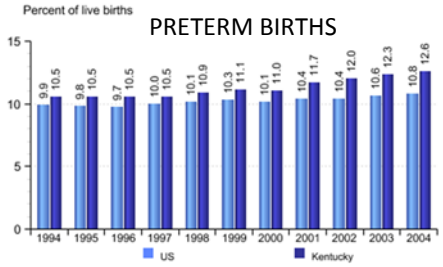
Early elective deliveries occur when labor is induced or cesarean sections are performed without a medical reason between 37 and 39 weeks of gestation. While the American Congress of Obstetricians and Gynecologists has advised against elective delivery prior to 39 weeks for decades, early elective deliveries doubled between 1990 and 2006 in the United States to greater than 15% of all deliveries.[1] While a planned delivery may be convenient for mothers and hospitals, it is associated with significant risks to both mother and baby compared to deliveries after 39 weeks gestation. In addition, the brain is that last major organ to develop, and the last 4-6 weeks of pregnancy are a critical time for brain growth that should not be cut short. Babies at 37 or 38 weeks have more complications, more NICU admissions, and longer average length of stays that full term infants.

Risks with EED:[1,2]

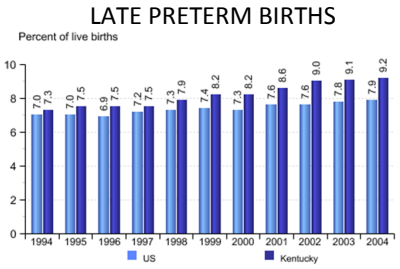
- Neonatal Intensive Care Unit Admission
- Respiratory Distress Syndrome
- Other breathing problems
- Low Apgar scores
- Feeding problems

Kentucky Data on Early Elective Deliveries

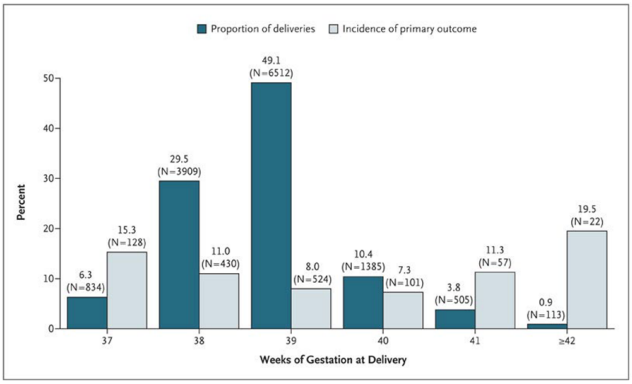
In 2006, Kentucky was one of the first states to determine that the rising rates of preterm birth were being driven by the bigger premies, now called LATE PRETERM. Because they were bigger babies they were thought not to be at high risk, and were often delivered without medical indications, i.e., at the convenience of the mother or the provider. Reducing these early elective deliveries became an emphasis in the Healthy Babies are Worth the Wait project, done in collaboration with Johnson & Johnson and March of Dimes. More and more literature came out citing short and long-term adverse outcomes in these late preterm babies that made the case for change.



Rising rates of preterm births (left) were clearly driven by the increase in babies born late preterm (right).
Data from March of Dimes Peristats



In 2009, in an article in the NEJM, researchers from the NIH Maternal Fetal Medicine Network studied elective repeat cesarean deliveries in their institutions, many of which were occurring before 39 weeks (contrary to the ACOG guideline). Even those babies who were born electively at 37 and 38 weeks, technically in the range of "term", had increased morbidities. These babies are now referred to as EARLY TERM infants. Since 2009 ACOG, the Joint Commission for Accreditation of Hospital, Center for Medicaid Services, and others have worked collaboratively to promote implementation of policies to eliminate non-medically indicated deliveries prior to 39 weeks. Eliminating all elective deliveries before 39 weeks, as recommended by ACOG guidelines, will address non-medically indicated deliveries for both late preterm and early term infants.



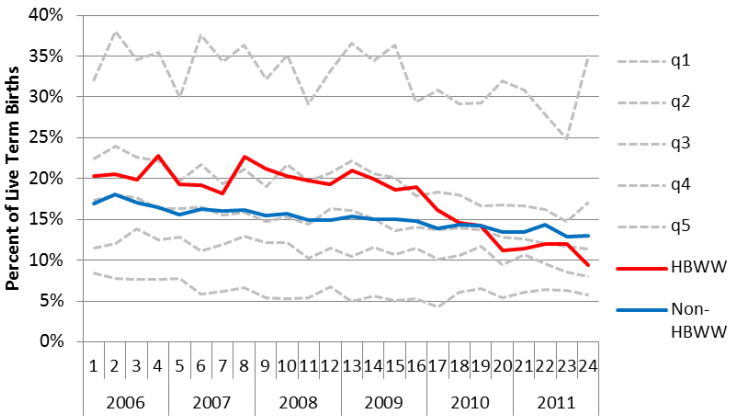
Timing of elective repeat cesarean delivery at term and neonatal outcomes.
Tita AT; Landon MB; Spong CY; Lai Y; Leveno KJ; Varner MW; Moawad AH; Caritis SN; Meis PJ; Wapner RJ; Sorokin Y; Miodovnik M; Carpenter M; Peaceman AM; OSullivan MJ; Sibai BM; Langer O; Thorp JM; Ramin SM; Mercer BM; Eunice Kennedy Shriver NICHD Maternal-Fetal Medicine Units Network

New England Journal of Medicine. 360(2):111-20, 2009 Jan 8.

Estimation of Early Elective Deliveries with Birth Certificate Data

The HRSA Regions IV and VI Collaborative Improvement and Innovation Network recently developed a tool for assessing early elective deliveries using vital statistics data. While it is not an exact match to the JACHO indicator, it correlates well, and allows states to compare their trends with the trends of other states. In Kentucky's data (right) live birth certificate files were used to calculate a surrogate measure to assess and monitor early elective deliveries completed prior to 39 weeks completed gestation. From 2006 to the last quarter of 2011, early elective deliveries in HBWW hospitals have declined by 45%. This decreasing trend in HBWW hospitals is continuing and will hopefully show ongoing improvement. Nationally, <3% is achievable.

Early Elective Deliveries at Healthy Babies are Worth the Wait Sites Compared to All Other Hospitals in Kentucky, 2006-2011



Collaborative Improvement and Innovation Network (CoINN)[5]:Early Elective Delivery Team

The EED COIIN team has team members from all 13 southern states. The first task was to develop a common measurement tool that was easily obtainable for all states (see above). While states are taking a number of approaches, three main strategies are being developed in states:

(1) Perinatal Quality Collaboratives. There are about a dozen perinatal quality collaboratives around the country, with voluntary participation of hospitals in the state. Clinical leaders develop packages of evidence-based practices around a specific topic, and then all participating hospitals work to implement the evidence-based strategies and report and share data to measure improvements in quality. For EED, hospitals implement a policy to stop the scheduling of early elective deliveries that have no medical indication (see Ohio experience below)

(2) Hospital Engagement Networks. This approach is being promoted nationally through the Strong Start Initiative. Led by the state hospital association, hospitals voluntarily work on a specific topic, in this case reducing early elective delivery, and also learn from each other about challenges and successes. The Kentucky Hospital Association is leading this effort in KY.

(3) Medicaid payor strategies. Several of the COIIN states have passed legislation directing their state Medicaid department to not pay for early deliveries with no medical indication. Nationally, the Centers for Medicaid Services is developing a similar rule, which is expected to take effect in 2014.

Lessons from Ohio

The Ohio Perinatal Quality Collaborative was awarded a Medicaid Innovations Grant to implement a Neonatal Outcomes Improvement Project. The EED project included: promotion of optimal determination of gestational age with ultrasound; use of ACOG criteria for the indication and timing of scheduled births; increased awareness among pregnant women, nurses, and physicians of the risks of births between 36-38 weeks; improved communication between obstetricians and pediatricians; and inclusion of scheduled births as part of an overall culture of safety.[4]

OPQC Outcomes in the First 3 Years

- **21,000 births delayed from 36-38 weeks to ≥39 weeks**
- **3% reduction in neonatal intensive care unit (NICU) admissions**
- **$24.8 million in costs averted through reduced NICU admissions**

References:

1. Wilmink FA, Hukkelhoven CWPM, Lunshof S, et al. Neonatal outcome following elective cesarean section beyond 37 weeks of gestations: a 7-year retrospective analysis of a national registry. Am J Obstet Gynecol 2010;202:250.e1-8.
2. Main E, Oshiro B, Chagolla B, Bingham D, Dang-Kilduff L, and Kowalewski L. Elimination of Non-medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age. (California Maternal Quality Care Collaborative Toolkit to Transform Maternity Care) Developed under contract #08-85012 with the California Department of Public Health; Maternal, Child and Adolescent Health Division; First edition published by March of Dimes, July 2010.
3. TJC. Specifications Manual for Joint Commission National Quality Core Measures (2011a); Perinatal Care core Measure Set. 2011 [cited July 27, 2011]; Available from : http://manual.jointcommission.org/releases/TJC2011A/AppendixATJC.html#Table_Number_11_07_Conditions_Po
4. The Ohio Perinatal Quality Collaborative Writing Committee. A statewide initiative to reduce inappropriate scheduled births at $36^{0/7}$–$38^{6/7}$ weeks' gestation. Am J Obstet Gynecol 2010;202:243.e1-8.
5. Ghandour R., Presentation: *Collaborative Improvement & Innovation Network (CoIIN) 101*. Presented February 10,2013.